

Philip Clark Rosen, *Curriculum Vitae*

Education

1980 Bachelor of Science, University of Michigan, Ann Arbor
1987 Master of Science, in Zoology, Arizona State University, Tempe.
2000 Ph.D., in Ecology and Evolutionary Biology (major), and
Ecological Physiology (minor), University of Arizona, Tucson.

Employment

1987-1992 Research Assistant to Dr. Charles H. Lowe, Professor, Department of Ecology and Evolutionary Biology, University of Arizona, on National Park Service Sensitive Ecosystems Program, Organ Pipe Cactus National Monument, studying ecology of reptiles and amphibians, and vegetation structure and diversity.

1992,1995 Graduate Teaching Assistant at University of Arizona.

1992-1994 Collections computerization manager, Herpetology Laboratory, University of Arizona.

1993-2000 Co-principal investigator on grants and contracts from Arizona Game and Fish Department, U.S. Fish & Wildlife Service, and National Park Service.

1999-2000 Consultant on herpetological ecology, conservation, and monitoring, and wetland vertebrate restoration for USDA Forest Service, The Nature Conservancy, Pima County Government (Sonoran Desert Conservation Plan).

2001-present Assistant Research Scientist, School of Natural Resources, University of Arizona, Tucson, AZ 85721

Dissertation

Rosen, P. C. 2000. A monitoring study of vertebrate community ecology in the northern Sonoran Desert, Arizona. University of Arizona, Tucson. 307 pp.

Thesis

Rosen, P. C. 1987. Female reproductive variation among populations of Sonoran mud turtles (*Kinosternon sonoriense*). Arizona Sate University, Tempe. 80 pp.

Book

Lazaroff, D. W., P. C. Rosen, and C. H. Lowe. 2006. Amphibians, Reptiles, and Their Habitats in Sabino Canyon. University of Arizona Press. Published 30 March 2006.

Papers and Articles

Rosen, P.C. 2006. The amphibians and reptiles of the dry borderlands of northwestern Sonora and southwestern Arizona. Pp 310-337 in R. S. Felger and B. Broyles (*eds.*), Dry Borders: Great Natural Reserves of the Sonoran Desert. University of Utah Press, Logan, UT.

Rosen, P. C. 2006. Herpetofauna of the San Pedro River: a comparison with other sites. Pp. 106-111 in G. J. Gottfried, B. S. Gebow, L. G. Eskew, and C. B. Edminster (*compilers*), Connecting mountain islands and desert seas: biodiversity and management of the Madrean Archipelago II. Proceedings RMRS-P-36. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 631 p.

Rosen, P. C., W. R. Radke, and D. J. Caldwell. 2006. Herpetofauna of lowland bottomlands of southeastern Arizona: a comparison of sites. Pp. 112-117 in G. J. Gottfried, B. S. Gebow, L. G. Eskew, and C. B. Edminster (*compilers*), Connecting mountain islands and desert seas: biodiversity and management of the Madrean Archipelago II. Proceedings RMRS-P-36. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 631 p.

Hale, S. F., P. C. Rosen, J. L. Jarchow, and G. A. Bradley. 2006. Effects of the chytrid fungus on the Tarahumara frog (*Rana tarahumarae*) in Arizona and Sonora, Mexico. Pp. 407-411 in G. J. Gottfried, B. S. Gebow, L. G. Eskew, and C. B. Edminster (*compilers*), Connecting mountain islands and desert seas: biodiversity and management of the Madrean Archipelago II. Proceedings RMRS-P-36. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 631 p.

Rosen, P. C. 2004. Charles Herbert Lowe, Jr., 1920-2002. Copeia 2004: 963-972.

Rosen, P. C. 2003. Herpetology of the West Branch of the Santa Cruz River, Tucson. Sonoran Herpetologist 16(4):38-42.

Rosen, P. C. and J. Fonseca. 2002. Restoration of a Sonoran Desert spring ecosystem and vertebrate assemblage in an urban setting. Ecological Society of America Annual Meeting Abstracts 87:250.

Rosen, P. C. and S. R. Goldberg. 2002. Female reproduction in the western diamond-backed rattlesnake, *Crotalus atrox* (Serpentes, Viperidae) from Arizona. Texas Journal of Science 54(4):347-356.

Bradley, G. A., P. C. Rosen, M. J. Sredl, T. Jones, and J. E. Longcore. 2002. Chytridiomycosis in native Arizona frogs. Journal of Wildlife Diseases 38:206-212.

- Persons, T. B. and P. C. Rosen. 2002. *Cnemidophorus exsanguis* (Chihuahuan spotted whiptail): Geographic distribution. *Herpetological-Review* 33(4):321.
- Rosen, P. C. and C. R. Schwalbe. 2002. Widespread effects of introduced species on aquatic reptiles and amphibians in the Sonoran Desert region. Pp. 220-240 *In* B.A. Tellman (*ed.*), *Exotic Species in the Sonoran Desert*, University of Arizona Press.
- Rosen, P. C. and T. B. Person. 2002. *Sceloporus jarrovii* (Mountain spiny lizard): Geographic distribution. *Herpetological-Review* 33(4):322-323.
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- Mardt, C. R., K. R. Beaman, P. C. Rosen, and P. A. Holm. 2001. *Chionactis occipitalis* (Hallowell), Western Shovel-Nosed Snake. *Catalogue of American Amphibians and Reptiles* 731:1-12.
- Mardt, C. R., K. R. Beaman, P. C. Rosen, and P. A. Holm. 2001. *Chionactis palarostris* (Klauber), Sonoran Shovel-Nosed Snake. *Catalogue of American Amphibians and Reptiles* 732:1-5.
- Sartorius, S. S. and P. C. Rosen. 2000. Reproductive and population phenology of the lowland leopard frog in a semi-desert canyon. *Southwestern Naturalist* 45:267-273.
- Goldberg, S. R. and P. C. Rosen. 2000. Reproduction in the Mojave rattlesnake, *Crotalus scutulatus* (Serpentes: Viperidae). *Texas Journal of Science* 52:101-109.
- Goldberg, S. R. and P. C. Rosen. 1999. Reproduction in the Sonoran shovelnose snake (*Chionactis palarostris*) and the western shovelnose snake (*Chionactis occipitalis*) (Serpentes: Colubridae). *Texas Journal of Science* 51:153-158.
- Rosen, P. C., and C. R. Schwalbe. 1998. Using managed waters for conservation of threatened frogs. Pp. 180-202 *in* Anonymous (*compiler*), *Environmental, Economic, and Legal Issues Related to Rangeland Water Developments; Proceedings of a Symposium, November 13-15, 1997 at Arizona State University, Tempe* (available from Rosalind Pearlman, Arizona State University, College of Law, P.O. Box 877906, Tempe, AZ 85287-7906, (602) 965-2124, rosalind.pearlman@asu.edu).
- Rosen, P. C., S. S. Sartorius, C. R. Schwalbe, P. A. Holm, and C. H. Lowe. 1998. Annotated checklist of the amphibians and reptiles of the Sulphur Springs Valley, Cochise County, Arizona. Pp. 65-80 *in* B. Tellman, D. M. Finch, C. Edminster, and R. Hamre (*eds.*), *The Future of Arid Grasslands, Symposium Proceedings RMRS-P-3*. USDA Forest Service, Fort Collins, Colorado. 392 pp.
- Schwalbe, C. R. and P. C. Rosen. 1998. Solving the amphibian mystery: non-native fish predators, wetland loss, air quality studied in the Southwest. *People Land and Water* (USGS) November/December:10.

- Rosen, P. C. 1997. Causes of declines – opportunities for restoration. *Bajada* 5:12.
- Rosen, P. C. and C. H. Lowe, Jr. 1996. Ecology of the amphibians and reptiles at Organ Pipe Cactus National Monument, Arizona. Cooperative Park Studies Unit, National Biological Service, University of Arizona, Tucson. Tech. Rep. 53. 136 pp.
- Rosen, P. C., C. H. Lowe, Jr., and C. W. Conner. 1996. Reptiles and the relevance of biological monitoring. *Bajada* 4:13.
- Rosen, P. C. 1995. Widespread mimicry in a Sonoran Desert snake assemblage. *Sonoran Herpetologist* 8(12):128-133.
- Rosen, P. C. and C. H. Lowe, Jr. 1995. Lizard monitoring protocol. Pp. 4.1 - 4.49 in Organ Pipe Cactus national Monument Ecological Monitoring Program Monitoring Protocol Manual. Cooperative Park Studies Unit, National Biological Service, University of Arizona, Tucson. Special Report No. 11.
- Rosen, P. C., and C. R. Schwalbe. 1995. Bullfrogs: introduced predators in southwestern wetlands. Pp. 452-454 in E.T. LaRoe, G.S. Farris, C.E. Puckett, P. D. Doran and M. J. Mac. (editors), *Our Living Resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems*. U.S. Dept. Int., Natl. Biological Service, Wash., D.C. 530 pp.
- Rosen, P. C., C. R. Schwalbe, D. A. Parizek, P. A. Holm, and C. H. Lowe. 1995. Introduced aquatic vertebrates in the Chiricahua region: effects on declining native ranid frogs. Pp. 251-261 in L. F. DeBano, P. F. Ffolliott, A. Ortega-Rubio, G. J. Gottfried, R. H. Hamre, and C. B. Edminster (tech. coords.), *Biodiversity and Management of the Madrean Archipelago: the sky islands of southwestern United States and northwestern Mexico*. Gen. Tech. Rep. RM-GTR-264. U.S.D.A. Forest Service, Fort Collins, Colorado. 669 pp.
- Rosen, P. C. 1995. Getting around in the dark. *Sonorienis* 15(1):11,24.
- Rosen, P. C and C. H. Lowe. 1994. Highway mortality of snakes in the northern Sonoran Desert of Arizona. *Biological Conservation*. 68:143-148
- Rosen, P. C. 1991. Comparative ecology and life history of the racer (*Coluber constrictor*) in Michigan. *Copeia* 1991:897-909.
- Rosen, P. C. 1991. Comparative field study of body temperatures in gartersnakes. *J. Herpetol.* 25:301-312.
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- Schwalbe, C. R. and P. C. Rosen. 1988. Preliminary report on effects of bullfrogs on wetland herpetofauna in southeastern Arizona. In R. C. Szaro, K. E. Severson, and D. R. Patton (eds.),

Management of Amphibians, Reptiles, and Small Mammals in North America. USDA Forest Service, General Technical Report RM-166, Fort Collins, Colorado, USA. Pp. 166-173.

Congdon, J. D., D. W. Tinkle, and P. C. Rosen. 1983. Egg components and utilization during development in aquatic turtles. *Copeia* 1983:264-268.

Tinkle, D. W., J. D. Congdon, and P. C. Rosen. 1981. Nesting frequency and success: implications for the demography of painted turtles. *Ecology* 62:1426-1432.

Formal Reports

Rosen, P.C. 2007. Conservation of urban amphibians in Tucson: salvage project report and discussion of habitat issues. Report to Pima County Flood Control District and Board of Supervisors.

Rosen, P.C. 2007. Herpetofaunal habitat quality status on the Santa Cruz River bottom between Ajo Way and 29th Street, Tucson, Arizona. Report to Pima County Flood Control District and Board of Supervisors.

Rosen, P.C., H.-W. Hermann, and C. Melendez. 2006. Phylogeography of the Southwestern mud turtle (*Kinosternon sonoriense* Leconte). Final report to Arizona Game and Fish Department and CONABIO (Mexico).

Rosen, P.C. 2006. Nocturnal rodents and ground-dwelling arthropods As habitat quality indicators on former agricultural lands in Avra Valley, Pima County, Arizona. Report to City of Tucson, Habitat Conservation Plan, Technical Advisory Committee.

Rosen, P.C. and J.E. Wallace. 2005. Monitoring outline for: Pima County SDCP riparian and aquatic HCP elements (plants, fish, amphibians and reptiles). Report to Scientific and Technical Advisory Team of the Sonoran Desert Conservation Plan.

Rosen, P. C. and D. J. Caldwell. 2004. Aquatic and riparian herpetofauna of Las Cienegas National Conservation Area, Pima County, Arizona. Final Report to Bureau of Land Management. 35 pp.

Rosen, P. C. 2004. Avra Valley snakes: Marana survey report for the Ground Snake (*Sonora semiannulata*). Final Report to Town of Marana on Ground Snake. 17 pp.

- Rosen, P. C. 2004. Ecological opportunities in the lower Santa Cruz Valley of Avra Valley and the Santa Cruz Flats, with a focus on reconnaissance of Pima County Flood Control District properties. Report to Pima County Flood Control District and Board of Supervisors. 16 pp.
http://www.pima.gov/cmo/sdcp/reports/d50/Avra_Lower%20Santa%20Cruz.pdf
- Rosen, P. C. 2004. Cañada Del Oro ecological reconnaissance, 15-19 may 2004. Report to Pima County Flood Control District and Board of Supervisors. 23 pp.
<http://www.dot.pima.gov/flood/resman/CDO%20Ecological%20Report.pdf>
- Rosen, P. C. 2003. Avra Valley snakes: Marana survey report for Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*). Final Report to Town of Marana on Shovel-Nosed Snake. 23 pp.
- Rosen, P. C. and J. Fonseca. 2003. Impacts on habitat and restoration potential in the Pinal-Pima Bosque, Lower Santa Cruz Valley. Document for Pima County Administrator and Board of Supervisors, Tucson, Arizona. 14 pp.
- Rosen, P. C. 2003. Distribution and ecology of amphibians and reptiles at Ironwood Forest National Monument. I. Desert Iguana, Chuckwalla, and Desert Tortoise. Final report section Biological Survey of Ironwood Forest National Monument, Arizona-Sonora Desert Museum) to Bureau of Land Management. 52 pp.
- Rosen, P. C. 2003. Phylogeography of Canyon Spotted Whiptail lizards in Arizona (*Cnemidophorus burti stictogrammus* and *C. b. xanthonotus*). Final Report to U.S. Department of Defense, Luke Air Force Base. 52 pp.
- Rosen, P. C. 2003. Taxonomic status of the Sonoyta Mud Turtle (*Kinosternon sonoriense longifemorale* Iverson) based on mitochondrial d-loop sequence, with a discussion of phylogeography. Final report to Arizona Game and Fish Department and USFWS. 35 pp.
- Paredes, R. Paredes and P. C. Rosen. 2003. Status of the Sonoyta Mud Turtle (*Kinosternon sonoriense longifemorale*) in Río Sonoyta, Mexico. Final report to Arizona Game and Fish Department and USFWS. 16 pp.
- Rosen, P. C., C. W. Conner, R. B. Duncan, P. A. Holm, T. B. Persons, S. S. Sartorius, and C. R. Schwalbe. 2002. Status and ecology of the Red-backed Whiptail (*Cnemidophorus burti xanthonotus*) in Arizona. Final Report to Arizona Game & Fish Department, Heritage Grant (IIPAM program) I99017. 77 pp.
- Rosen, P. C., R. B. Duncan, P. A. Holm, T. B. Persons, S. S. Sartorius, and C. R. Schwalbe. 2002. Status and ecology of the Giant Spotted Whiptail (*Cnemidophorus burti stictogrammus*) in Arizona. Final Report to Arizona Game & Fish Department, Heritage Grant (IIPAM program) I99018. 128 pp.

- Rosen, P. C. and C. R. Schwalbe. 2002. Conservation of wetland herpetofauna in southeastern Arizona. Final report to Arizona Game & Fish Dept. Heritage Program (IIPAM I99016), and USFWS. 160 pp.
- Rosen, P. C. and C. R. Schwalbe. 2001. Bullfrog impacts on native wetland herpetofauna in southern Arizona. Final report to Arizona Game & Fish Dept. Heritage Program (IIPAM I97041), and USFWS. 120 pp.
- Rosen, P. C. and K. Mauz. 2001. Biological values of the West Branch of the Santa Cruz River, with a Preliminary Flora. Document (independently contracted) for the Sonoran Desert Conservation Plan, Pima County Board of Supervisors, Pima Co., Arizona.
<http://www.co.pima.az.us/cmo/sdcp/sdcp2/reports/WB/WestB.htm>
- Rosen, P. C. 2000. Aquatic vertebrate conservation in Pima County: concepts and planning development. Document (independently contracted) for the Sonoran Desert Conservation Plan, Pima County Board of Supervisors, Tucson, Arizona.
<http://www.co.pima.az.us/cmo/sdcp/reports/d7/007AQU.PDF>
- Rosen, P. C. and C. R. Schwalbe. 1998. Status of native and introduced species of amphibians and reptiles at the San Bernardino National Wildlife Refuge. Final Report to Arizona Game & Fish Dept. Heritage Program, and USFWS. 52 pp.
- Rosen, P. C. and C. R. Schwalbe. 1997. Bullfrog impacts on sensitive wetland herpetofauna, and Herpetology of the San Bernardino National Wildlife Refuge. Final Report to Arizona Game & Fish Dept. Heritage Program, and USFWS. 30 pp.
- Rosen, P. C. and C. R. Schwalbe. 1997. Bullfrog impacts on sensitive wetland herpetofauna, and Herpetology of the San Bernardino National Wildlife Refuge. Final Report to Arizona Game & Fish Dept. Heritage Program, and USFWS. 30 pp.
- Rosen, P. C. and C. H. Lowe. 1996. Population ecology of the Sonoran Mud Turtle (*Kinosternon sonoriense*) at Quitobaquito Springs, Organ Pipe Cactus National Monument, Arizona. Final Report to Arizona Game & Fish Dept. Heritage Program, Phoenix. 52 pp + appendices.
- Rosen, P. C. and C. R. Schwalbe. 1996. Bullfrog impacts on sensitive wetland herpetofauna, and Herpetology of the San Bernardino National Wildlife Refuge. Final Report to Arizona Game & Fish Dept. Heritage Program, and USFWS. 47 pp.
- Rosen, P. C. and C. R. Schwalbe. 1996. A critical interim evaluation of the effectiveness of bullfrog removal methods at San Bernardino National Wildlife Refuge. Report to Arizona Game & Fish Dept. Heritage Program, and USFWS. 21 pp.
- Fernandez, P. J. and P. C. Rosen. 1996. Effects of the introduced crayfish *Orconectes virilis* on native aquatic herpetofauna in Arizona. Final Report to Arizona Game & Fish Dept. Heritage Program. 56 pp + appendix.

- Rosen, P. C., P. A. Holm, and C. H. Lowe. 1995. Ecology and status of shovelnosed snakes (*Chionactis*) and leafnosed snakes (*Phyllorhynchus*) at and near Organ Pipe Cactus National Monument, Arizona. Final Report to Arizona Heritage Program, Arizona Game and Fish Dept., Phoenix. 65 pp.
- Parizek, D.A., P. C. Rosen, and C. R. Schwalbe. 1995. Ecology of the Mexican rosy boa and Ajo Mountain Whipsnake in a desert rockpile snake assemblage. Final Report to Arizona Heritage Program, Arizona Game and Fish Dept., Phoenix. 65 pp.
- Lowe, C. H. and P. C. Rosen. 1992. Ecology and conservation of the amphibians and reptiles at Organ Pipe Cactus National Monument. Final Report to National Park Service, Cooperative National Park Resources Studies Unit, University of Arizona. 497 pp.
- Lowe, C. H., P. C. Rosen, and E. B. Wirt. 1992. Vegetation structure and diversity in natural communities at Organ Pipe Cactus National Monument, Arizona. Final Report to National Park Service, Cooperative National Park Resources Studies Unit, University of Arizona. 170 pp.
- Rosen, P. C. and C. R. Schwalbe. 1988. Status and ecology of the Mexican and Narrow-headed Gartersnakes (*Thamnophis eques megalops* and *Thamnophis rufipunctatus rufipunctatus*) in Arizona. Unpublished Final Report from Arizona Game and Fish Dept. (Phoenix, Arizona) to U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 90 pp.
- Rosen, P. C. 1986. Population decline of Sonoran Mud Turtles at Quitobaquito Springs: Final Report. Cooperative National Park Resources Studies Unit, University of Arizona, Tucson.

Award

Jarchow Conservation Award, Tucson Herpetological Society, 2003

Committee Service

Mexican and Narrow-headed Gartersnake Conservation Team (USFWS, AGFD), 2006-present.

Chiricahua Leopard Frog Recovery Team (USFWS), 2003-present.

Sonoyta Mud Turtle Conservation Team (USFWS, AGFD), 1999-present.

Rio Grande National Park Invasive Species Study Group, National Park Service, 2003.

Mentor for Undergraduate Internship Program in Conservation Biology, University of Arizona, 2002-3.

Agua Caliente Park Ecological Restoration Study, Biological Experts Group, Pima County and U.S. Army Corps of Engineers (Los Angeles), 2002-2003.

Grazing Impacts on Southwestern Herpetofauna Evaluation Team, USDA Forest Service, Albuquerque, N.M., 2001-2002.

Declining Amphibian Populations Task Force, Southwestern U.S. Working Group, Chairman of Factors of Decline Subcommittee, 1997-2000.

Malpai Borderlands Group Greater Board Member, 1996-2000.

Ecological Monitoring Program Advisory Committee, Organ Pipe National Monument, 1992-2000.

Tucson Herpetological Society Board of Directors, 1997-8.